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ATT to COM-0546

13 July 1959

**MEMORANDUM FOR THE RECORD**

**SUBJECT:** The Meeting of July 9 at HMD in Los Angeles

**Attendance:** HMD -

ANPA  
LOCKHEED:  
SEL -

and at least 5 others.

In addition there were some 10 to 15 unidentified individuals. I was told that the attendance was only partly cleared for COMNA.

1. The purpose of the meeting was to consider and, if possible, to reaffirm in the light of SEL's investigation the decisions reached at the earlier progress review meeting to conduct Flight VI on a "medium risk" basis using AJ-1 fuel and with some weight reduction in the system.

2. Lockheed, through [redacted] indicated a 90% plus confidence factor (aside from reliability) for Flight VI assuming:

- |   |           |                 |
|---|-----------|-----------------|
| a. Altitude                                       | 120 miles |                 |
| b. Eccentricity of                                | .05       |                 |
| c. Use of AJ-1 fuel (equivalent weight reduction) | 60 lbs.   |                 |
| d. 170° azimuth                                   | "         | 20 lbs.         |
| e. Reductions in weight (see attachment)          |           | 63 lbs.         |
| <b>TOTAL</b>                                      |           | <b>143 lbs.</b> |

3. SEL, in commenting on the Lockheed recommendations, indicated that the last flight ran 200 ft per second less velocity than the Lockheed figure but agreed that the difficulties in interpreting the scanty track data could account for the difference in the two figures.

4. SEL had not had the opportunity to consult with Lockheed prior to the meeting and had therefore assumed the previous eccentricity of

NRO review(s) completed.

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.01 in preparing their recommendations for Flight VI. On the same assumptions otherwise (AJ-1 fuel, 170° azimuth, 63 lbs. weight reduction) and further assuming a 5 day life, STL's confidence factor was less than 40%. Their recommendation was to seek higher altitude from the system, retain the lower eccentricity, and to seek improved performance in both the Thor and the Ball Hunter in certain specified areas.

25X1 5. [ ] also emphasized strongly the need for AJ-1 engine testing in the extreme range of mixture ratios to be encountered during the flight.

6. As the meeting closed there appeared to be agreement between the parties that:

a. Lockheed would increase its weight reduction another 14 lbs. This would be derived from eliminating H-2 bottle and certain grid mountings.

b. STL would run another set of computations on the assumption of a .05 eccentricity and come up with a new estimate of probable success.

c. The fuel mixture ratio question raised by [ ] would be investigated. 25X1

d. When the results of 6.b. and 6.c. were known WFO, STL and Lockheed would seek agreement prior to the July 14 meeting in Washington.

e. On account of the new range safety computations required by the changed azimuth, the next firing date must be put over to July 24th.



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LOCKHEED PROPOSAL - 90% Probability

Fuel to be used	871	871
Injection Velocity	26180	26180
Altitude	120	120
Eccentricity	.05	.05
Empty wgt orbit vehicle	1753	1692
Weight reduction	62.8	105.5

Immediate  
for next  
flight

(Trim structure	3.0		
(Inverter heat sinks	3.0		
(Gloss balls	12.0		
(Acquisition beacon battery	9.0		
(Recovery body			
Film	10		
Ballast	5		
Die	2		
Cooling	1.2		
Torque motor	1.1	19.3	
(Solar reset of timer	5.0		
(1800" titanium sphere	7.0		
(Ground plane	1.0		
(Turbine exhaust heat shield	1.5		
(H <sub>2</sub> expansion chamber	0.5		
(Separation monitor	1.5	62.8	62.8

Up to 2  
months

(SS/C Revisions			10.0
(Paint			2.0
(Hydraulic mounting plate			2.0
(Environmental measurements			3.0
(Longitudinal acceleration pressure measurements			1.2
(Inside vehicle			1.5
(Reduce gauges			15.6
(Move destruct system to new location			8.0

105.5

Assumption is higher injection velocity rather than higher altitude.

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